

DIRECT TESTIMONY OF

MICHAEL D. SHINN

ON BEHALF OF

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 2011-2-E

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND CURRENT POSITION.

A. My name is Michael D. Shinn, and my business address is 220 Operation Way, Cayce, South Carolina 29033. I am currently employed by SCANA Services, Inc. as General Manager of the Coal and Oil Procurement Department ("Fuel Department"). In this position I manage the purchase and delivery of coal, No. 2 fuel oil and limestone on behalf of South Carolina Electric & Gas Company ("SCE&G" or the "Company") and as agent for South Carolina Generating Company ("GENCO").

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND YOUR BUSINESS EXPERIENCE.

A. I earned a Bachelor of Science Degree in Mechanical Engineering from the University of South Carolina in Columbia, South Carolina in 1995. While in college, I was a student intern in the Fossil Hydro Power Plant Performance Group for 5 years. Since graduation, I have held various positions within the Fuel

1 Department to include managing rail transportation and delivery, spot coal
2 purchasing, coal quality management, synthetic fuel optimization and state and
3 federal regulatory reporting. In my most recent position as Manager of Fuel
4 Technical Services, Industrial Coal and Synfuel, I have worked with coal
5 suppliers and SCE&G's power plants to increase fuel and transportation
6 flexibility as well as maximize the utilization of the Company's assets. In
7 December 2009, I was promoted to my current position and report directly to the
8 Senior Vice-President, Fuel Procurement and Asset Management, SCANA
9 Services, Inc.

10
11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

12 A. The purpose of my testimony is to describe the procurement and delivery
13 activities for coal and No. 2 fuel oil used in electric generation for SCE&G as
14 well as GENCO's Williams Station for the period January 1, 2010 through
15 December 31, 2010 (the "Review Period"). I also discuss changes that have
16 occurred in coal markets since the last annual fuel adjustment hearing and how
17 these changes affected coal procurement during the Review Period. Finally, I
18 describe the procurement and delivery of limestone for our wet scrubbers located
19 at our Wateree and Williams steam plants.

1 **Q. PLEASE DESCRIBE GENCO AND ITS RELATIONSHIP TO SCE&G.**

2 A. GENCO was incorporated on October 1, 1984 and owns the Williams
3 Electric Generating Station. GENCO sells to SCE&G the entire capacity and
4 output from the Williams Station under a Unit Power Sales Agreement approved
5 by the Federal Energy Regulatory Commission. Hereafter, when I refer to
6 SCE&G's fossil steam plants, I include GENCO.

7
8 **Q. PLEASE SUMMARIZE SCE&G'S FUEL PROCUREMENT NEEDS AND**
9 **PURCHASING PRACTICES.**

10 A. Under my supervision, the Fuel Department purchases all necessary coal,
11 No. 2 fuel oil, limestone and associated transportation for SCE&G's fossil plants
12 focusing on reliability of supply, conformity with operational and environmental
13 requirements, and reasonable prices. Given its mix of generation assets, SCE&G
14 has significant need for coal in any given year to provide reliable energy service
15 to our customers. In 2010, for example, SCE&G consumed 5,286,156 tons of
16 coal in the production of electricity for its customers. SCE&G's burn rate
17 increased in 2010 compared to 2009. The burn rate for coal in 2010 was
18 approximately 9.8% higher than in 2009, which equates to an increase in coal
19 consumption of 518,728 tons. This increase in coal consumption was largely due
20 to increased demand for energy.

1 **Q. HOW DOES THE COMPANY SECURE NECESSARY QUANTITIES OF**
2 **COAL AND NO. 2 FUEL OIL AT COMPETITIVE PRICES?**

3 A. SCE&G maintains an active list of qualified suppliers of coal and No. 2
4 fuel oil used to power its plants. Typically, as contracts expire or needs are
5 identified, solicitations are issued for competitive sealed bids.

6
7 **Q. HOW DOES SCE&G APPROACH THE MARKET PLACE FOR COAL**
8 **AND NO. 2 FUEL OIL?**

9 A. Coal is procured under long-term (more than one year) and spot purchase
10 (up to one year) agreements to achieve a balance of reliable supplies, while
11 maintaining flexibility to react to market changes or short-term system needs.
12 Under normal market conditions, SCE&G seeks to have long-term purchases
13 represent approximately 75% to 80% of projected system demand. Spot
14 purchases provide a mechanism to manage inventories and react to short-term
15 changes in the marketplace.

16 While SCE&G's goal has been and remains one of balancing its purchases
17 of coal between long-term and short-term contracts, market conditions may alter
18 this goal in any given year. In the Review Period, demand for energy somewhat
19 recovered from the reduced demand the Company experienced in 2009, but is still
20 below historic norms. In addition, natural gas prices remained at very
21 competitive rates for much of the year making it the fuel of choice for economic
22 dispatch in many circumstances. As a result, the need for SCE&G to purchase

spot coal supplies during the Review Period was still severely diminished when compared to our 20% to 25% goal. This reduced reliance on coal generation in 2010 resulted in SCE&G meeting most of its coal-fired generation needs from deliveries under preexisting long-term coal supply contracts entered prior to 2009. Looking forward into 2011, we continue to expect our needs for coal will be primarily met by deliveries under our long-term contracts. Spot purchases in 2011 are projected to be approximately 2.4%, which is less than our goal of 20% to 25%. It is our expectation that the balance between spot purchases and deliveries under long-term contracts will return to a more traditional balance in 2012.

In contrast to the complexities of coal purchasing contracts, contracts for No. 2 fuel oil are requirements contracts that are competitively solicited every two years. Generally, pricing for these contracts is based upon market indices that are adjusted daily.

Q. PLEASE SUMMARIZE THE QUANTITY, QUALITY, AND TERM OF THE COMPANY'S COAL PURCHASES.

A. During the Review Period, the Company took delivery of approximately 4.9 million tons of coal under long-term agreements and approximately 235,000 tons of coal through spot purchases. All together, long-term agreements provided approximately 95.4% of the requirement for the Company's five coal-fired

1 stations and GENCO's Williams Station, while spot purchases accounted for the
2 remaining approximately 4.6% of our coal requirements during 2010.

3 For the current period of January 2011 through December 2011, the
4 Company has long-term contracts with nine (9) suppliers for the delivery of 4.0
5 million tons of coal. This quantity represents approximately 97.6% of SCE&G's
6 expected total coal receipts for 2011. The coal purchased under these contracts
7 ranges in quality from 12,200 to 13,000 British Thermal Units ("BTU") per
8 pound and sulfur contents from 0.98% to 1.95%. Most of these contracts are for
9 an initial period of three years with some options to renew. The amount of coal
10 under contract will vary from year to year, and the contract terms will vary from
11 contract to contract. For example, in some of our coal contracts, we have been
12 successful in negotiating fixed pricing for the term of the contract, while other
13 coal contracts contain predetermined price adjustments, price collars and
14 quarterly adjustments.

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Q. HOW DOES SCE&G INSURE THAT THE RIGHT QUANTITY OF FUEL SUPPLIES IS AVAILABLE TO MEET GENERATION DEMANDS?

A. SCE&G uses several steps to bring the fuel supply and demand factors together. Fuel usage levels are calculated and forecasted for each of the generating plants. Coal and No. 2 fuel oil inventories are then validated and contract quantities are summed and compared against system usage to determine needs going forward. With this information, the Fuel Department carefully evaluates the Company's coal requirements and determines whether

1 transportation options under current contracts, spot purchases or additional long-
2 term agreements are appropriate. Through this process, SCE&G has been
3 successful in leveraging long-term and short-term coal purchases to achieve
4 reasonable purchase prices while insuring the reliability of coal supplies
5 necessary to support system needs.

6 No. 2 fuel oil is purchased to insure adequate back up to natural gas for
7 SCE&G's intermediate and peaking generators. Contracts are awarded on a
8 biannual basis using competitive bids. Typically, fuel storage tanks are filled
9 going into peak usage periods.

10
11 **Q. HOW DOES THE COMPANY DETERMINE A "REASONABLE PRICE"**
12 **FOR FUEL PURCHASES?**

13 A. The Fuel Department works diligently to achieve an optimization between
14 adequate supplies of acceptable quality at reasonable purchase prices. The
15 ultimate value of the delivered fuel (coal or No. 2 fuel oil) is determined by the
16 actual delivered cost per Million British Thermal Units ("MBTU"), accounting
17 for any fuel impacts in the operation of our generating plants. Market prices
18 fluctuate due to such things as seasonality, political turmoil, national weather
19 trends and domestic/international supply/demand imbalances. SCE&G uses
20 mechanisms such as predetermined price adjustments, price collars, and quarterly
21 adjustments to mitigate the effect market conditions have on coal contracts.

1 Market publications, indices, and industry contacts are some of the ways that we
2 stay abreast of market trends and conditions.

3
4 **Q. HOW DOES THE COMPANY MANAGE COAL INVENTORIES TO**
5 **INSURE RELIABILITY AND AVAILABILITY?**

6 A. To maintain adequate supply at its coal-fired generating facilities, the
7 Company continuously manages inventories using long-term contracts, spot
8 market purchases, and transportation options under its existing contracts. The
9 Company uses these tools in support of its efforts to maintain an inventory of
10 approximately 925,000 tons of coal based on the average of each of twelve
11 months' ending inventories to support anticipated consumption. This
12 methodology allows for an inventory of more than 925,000 tons at the beginning
13 of high demand periods and less than 925,000 tons entering the milder months.
14 This inventory level aids in protecting SCE&G against availability, production
15 and delivery problems that may arise from time to time. It also affords the
16 resources to meet our supply needs when short-term market prices are
17 unfavorable. It is always important to balance short-term needs against long-term
18 requirements and expected future operating conditions.

19 During the Review Period, the Company's inventory level exceeded its pre-
20 recession inventory level due to depressed demand for energy combined with
21 prices for natural gas that are significantly lower than pre-recession prices. The
22 current larger than normal inventory is projected to return to more normal levels

1 in 2012, even as the Company continues to take full advantage of the current
2 lower priced natural gas for economic generation.

3
4 **Q. WHAT STEPS HAS SCE&G TAKEN TO MANAGE ITS COAL**
5 **INVENTORY LEVEL DURING THE REVIEW PERIOD?**

6 A. During the Review Period, SCE&G renegotiated several coal contracts. In
7 renegotiating these contracts, the Company worked with suppliers to secure
8 certain deferments of coal deliveries to later periods.

9 SCE&G also expanded the coal stock out area at Cope Station in Cope,
10 South Carolina. This gives SCE&G a fully permitted area in which to more
11 readily store additional inventory when required.

12 The coal inventory level is now being reduced by the increased burn rate
13 during the current winter period, and the Company will continue to manage the
14 inventory level throughout 2011. Our goal is to return the Company's inventory
15 level to our traditional 925,000 ton yearly average as soon as practicable. Based
16 upon current burn rates, fuel prices and projections, we expect the inventory at
17 the end of 2011 to be generally consistent with the level traditionally planned for
18 when entering a peak period.

1 **Q. PLEASE PROVIDE AN OVERVIEW OF TRANSPORTATION RATES**
2 **DURING THE REVIEW PERIOD.**

3 A. In 2010, CSX Transportation, Inc. (“CSX”) remained the primary rail
4 transporter of coal for SCE&G. While the CSX contract rates remained relatively
5 stable during 2010, these rates are subject to quarterly adjustments according to
6 indices published by the American Association of Railroads. SCE&G took
7 delivery of 4,932,853 tons of coal under this contract during 2010, representing
8 95.92% of the Company’s total receipts of coal.

9 Norfolk Southern Railway Company (“NS” or “Norfolk Southern”) has
10 only one delivery point in SCE&G’s service territory. This delivery point is at
11 Wateree Station and could account for nearly one-third of the Company’s need for
12 coal deliveries in some years. However, in 2010 SCE&G was only able to take
13 delivery at competitive rates of 76,541 tons of coal under its contract with Norfolk
14 Southern, representing 1.5% of total receipts.

15 As in the past, the Company will utilize the rail services of Norfolk
16 Southern to maximize benefit to our customers in the short- and long-term as
17 agreements are negotiated where NS is the most economic and reliable transporter.
18

19 **Q. PLEASE EXPLAIN HOW THE REMAINING 2.58% OF TOTAL COAL**
20 **RECEIPTS DURING THE REVIEW PERIOD WAS DELIVERED.**

21 A. During the Review Period, SCE&G received 133,193 tons of import coal at
22 Williams Station via waterborne vessel. This tonnage represents the remaining

1 2.58% of total coal receipts during the Review Period. SCE&G purchases import
2 coal to diversify its coal supply and transportation. This diversification provides a
3 measure of protection against domestic supply and transportation constraints or
4 disruptions as the Company recently experienced in 2004 and 2008.

5 The Company does not currently expect to receive any additional import
6 coal via waterborne vessel in 2011. Given the increasing demand for coal in
7 international markets and the supply imbalance which currently exists, it is
8 anticipated that the delivered price per MBTU for this mode of delivery will
9 exceed domestic supplies. However, we will continue to monitor and be aware of
10 price changes in foreign markets to ensure that SCE&G and its customers may
11 take advantage of delivered competitive prices in these markets.

12
13 **Q. WHAT WERE SCE&G'S DELIVERED COAL COSTS FOR THE**
14 **REVIEW PERIOD?**

15 A. Exhibit No. ____ (MS-1) entitled "Coal Purchased for Steam Plants,"
16 displays the average cost in dollars per MBTU by month for coal purchased during
17 the Review Period.

18
19 **Q. WHAT CHANGES IN FUEL COST DOES THE COMPANY ANTICIPATE**
20 **FOR THE 2011 FORECASTED PERIOD?**

21 A. As previously stated, fuel cost for the forecasted period is expected to
22 remain fairly stable with very few spot coal purchases anticipated. As 2011

1 progresses, the Company is prepared to make additional coal purchases if our
2 anticipated coal burn is higher than forecasted.

3
4 **Q. WHAT CHANGES DOES THE COMPANY ANTICIPATE IN THE COAL**
5 **MARKET FOR THE 2011 FORECASTED PERIOD?**

6 **A.** During 2010, the price per ton of Central Appalachian coal increased
7 dramatically from \$51.15 during the first week of January 2010 to \$77.75 during
8 the first week of 2011, representing a 52% increase.

9 Strong global demand for coal, particularly metallurgical coal used to
10 produce steel, has resulted in sharp increases in the price of domestic coal. Coal
11 that was once confined to the United States domestic steam coal market is
12 increasingly being demanded in Asian markets as metallurgical coal, thereby
13 decreasing the steam coal supply. According to the Energy Information Agency
14 (“EIA”), United States metallurgical coal exports nearly doubled in the first half of
15 2010 compared with the first half of 2009, and metallurgical coal has grown from
16 52% of total coal exports in 2008 to about 70% in 2010. Metallurgical coal
17 exports to Asia and Europe accounted for nearly 90 percent of the increase, with
18 significant increases to China, the Netherlands, Turkey, Japan and South Korea.
19 Given the increase in coal exports to Asian markets, the increase in use of natural
20 gas, and the decrease in utility and industrial demand, the production of coal in
21 Central Appalachia continues to decline. Other factors affecting production
22 include a dwindling coal reserve base, shortage of qualified miners, greater

1 regulation by the Environmental Protection Agency (“EPA”) and Mine Safety and
2 Health Administration (“MSHA”), the redeployment of capital dollars to
3 metallurgical mines versus steam coal mines, the ability to borrow money for
4 recapitalization of mines in general and the inability of mining companies to
5 acquire new mining permits. These factors will also continue to put upward
6 pressure on coal prices during 2011 and beyond. Consequently, the Company
7 expects coal prices to remain volatile for 2011 and for the foreseeable future.

8
9 **Q. WHAT HAS BEEN THE RECENT PRICING TREND IN THE NO. 2 FUEL**
10 **OIL INDUSTRY?**

11 A. Delivered No. 2 fuel oil average monthly prices during the Review Period
12 ranged from a low of \$15.41/MBTU in July of 2010 to a high of \$20.27/MBTU
13 in December of 2010. This pricing was up considerably from 2009 reflecting the
14 impact of the current economic recovery, actions of the Organization of
15 Petroleum Exporting Countries or OPEC, increasing demand in Asian markets
16 and continued political instability in oil producing countries.

17 Exhibit No. _ (MS-2) entitled “No. 2 Fuel Oil Purchased for Steam Plants,
18 Gas Turbines & Combined Cycle Units” shows the average system delivered No.
19 2 fuel oil prices in \$/MBTU for the Review Period.

1 **Q. WHAT OTHER STEPS HAS THE COMPANY TAKEN TO MITIGATE**
2 **FUEL-RELATED EXPENSES?**

3 A. SCE&G continues to expand its coal specifications by purchasing coal of
4 lower quality where practicable and acceptable to a coal-burning plant. During
5 2010, SCE&G took delivery of 651,344 tons with contracted BTU per pound
6 values less than its traditional specifications. A substantial portion of this coal is
7 blended and consumed at SCE&G's Cope Station.

8 As mentioned earlier in my testimony, SCE&G received deliveries of coal
9 from Norfolk Southern, a competing railroad with the CSX, for use at our Wateree
10 Station in Eastover, South Carolina. These deliveries resulted in transportation
11 savings for our customers when compared with CSX rates. We will continue to
12 utilize Norfolk Southern when possible. Currently, Wateree Station is the only
13 plant in SCE&G's system which has the capability to take delivery from two
14 different rail carriers. SCE&G's other plants are limited to CSX for plant direct
15 rail delivery.

16 SCE&G is also evaluating the fuel flexibility for all of its coal-fired plants.
17 This evaluation considers fuels from different regions of the United States and
18 South America with multiple sulfur, ash and BTU levels. Currently, transportation
19 rates, and in some cases original plant design, make coal from other basins non-
20 competitive with Central Appalachia due in large part to significant differences in
21 coal qualities that could impact plant operations.

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**Q. WHAT RESPONSIBILITIES DOES THE FUEL DEPARTMENT HAVE
WITH RESPECT TO SO₂ AND NO_x ALLOWANCES?**

A. The Fuel Department purchases or trades EPA sulfur dioxide (“SO₂”) and nitrogen oxide (“NO_x”) emission allowances as needed by SCE&G.

The Clean Air Act Amendment of 1990 requires electric utilities to reduce SO₂ emissions. An SO₂ Emission Allowance Trading Market was established by

1 the EPA to assist utilities in managing the costs of complying with these new
2 regulations. The Company has purchased SO₂ allowances as part of our overall
3 strategy to compensate for our SO₂ emissions. SO₂ emission allowance prices
4 have decreased during the Review Period due to the addition of scrubbers in the
5 industry as well as continued uncertainty over EPA modification of the Clean Air
6 Interstate rule. SO₂ allowances are approximately \$9.00 per allowance (one ton
7 SO₂) currently and are not expected to increase significantly until the EPA gives
8 final guidance on the issue. Prices may be impacted by the actions of hedge funds
9 and other financial organizations participating in the SO₂ markets for speculative
10 purposes, but, given the uncertainty during the Review Period, we have not
11 observed any significant impact on SO₂ allowance prices from the actions of
12 financial organizations. Their actions tend to increase allowance prices.

13 The Fuel Department also addresses the Company's needs for NO_x
14 emission allowances. Current annual NO_x allowance prices are approximately
15 \$345.00 per ton.

16
17 **Q. PLEASE EXPLAIN THE FUEL DEPARTMENT'S ACTIVITIES**
18 **RELATED TO THE PROCUREMENT OF LIMESTONE FOR SCE&G'S**
19 **POLLUTION CONTROL FACILITIES.**

20 A. As more fully discussed in the testimony of Company Witness Joseph K.
21 Todd, the Company installed wet limestone scrubbers at Wateree and Williams
22 Stations for SO₂ reduction. The Fuel Department is responsible for securing

adequate and reliable supplies of limestone for the effective operation of these scrubbers. There are limited suppliers for limestone for the Company's Williams and Wateree Stations. During the Review Period, the Company acquired its supplies of limestone from a single source.

The Company has completed the evaluation phase of our scrubbers so the testing of other limestone suppliers can now commence. The initial phase of new testing is set to commence in the first quarter of 2011.

The limestone is delivered to Williams and Wateree Stations by truck since the current source of supply is located near the plants. Further, a minimal inventory is maintained at each plant due to the close proximity of the current supply. In summary, the Company continues to evaluate supply and transportation options designed to insure adequate and reliable supplies of limestone at reasonable prices at its Williams and Wateree Stations.

Q. PLEASE PROVIDE THE COMMISSION WITH AN UPDATE CONCERNING LEGAL ACTION TAKEN BY SCE&G AGAINST SOME COAL SUPPLIERS.

A. In 2009, the Company initiated legal action against several of its coal suppliers for non-performance. The Company's claims against all suppliers but one have either been settled or litigated before the American Arbitration Association. The one unresolved case is scheduled to be heard, subject to any scheduling delays that may arise, later this year before the American Arbitration

1 Association. Any net benefits received as a result of these claims have been or
2 will be directly applied to reduce fuel costs in the period(s) that any benefits are
3 realized.

4
5 **Q. WHAT REQUEST DOES SCE&G MAKE OF THE COMMISSION IN**
6 **THIS PROCEEDING?**

7 A. The Coal and Oil Procurement Department has made reasonable and
8 prudent efforts to obtain reliable, high quality supplies of coal, No. 2 fuel oil and
9 limestone and associated transportation at the lowest possible cost to SCE&G's
10 customers. Therefore, on behalf of SCE&G, I respectfully request that the
11 Commission find that the Company's fuel purchasing practices were reasonable
12 and prudent for the Review Period.

13
14 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

15 A. Yes.

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Coal Purchased for Steam Plants
\$/MBTU

Jan. 10	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
\$4.44	\$4.33	\$4.07	\$4.37	\$4.50	\$4.39	\$4.21	\$4.38	\$4.39	\$4.29	\$4.23	\$4.21

No. 2 Fuel Oil Purchased for Steam Plants, Gas Turbines & Combined Cycle Units

\$/MBTU

Jan. 10	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
\$16.08	\$15.73	\$16.33	\$17.52	\$16.81	\$16.23	\$15.41	\$16.59	\$16.32	\$17.57	\$17.62	\$20.27